Ensuring Effective Pain Treatment
A National and Global Perspective

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MEDICAL AVAILABILITY OF EFFECTIVE PAIN MEDICATION is vitally important domestically and globally. Medical advances have substantially improved the technical capacity to control pain and diminish its consequences. Worldwide, millions of persons with chronic, acute, and terminal conditions have found relief from excruciating pain through medical intervention. However, richer countries have disproportionately benefited from improvements in access to and use of pain medication. The tragedy is that for most of the world's population, particularly persons in poorer countries, effective pain control is entirely unavailable.

An estimated 80% of persons worldwide do not receive adequate treatment for pain, and severe undertreatment for pain is an acute problem in more than 150 countries.[1] Hospice and palliative care services exist or are being developed in about 100 countries, but their global distribution is uneven. Although the majority of the world's population lives in Asia and Africa, only approximately 6% of the world's palliative care services are located in these continents.[2]

Access to pain medication is distributed unevenly among rich and poor nations and between their rich and poor populations. Domestically and globally, the burden of poorly managed pain is disproportionately borne by the most vulnerable: the poor, children, the elderly, individuals with a history of substance abuse, the mentally ill, women, minorities, and people of color.[3] Thus, although the problem of undertreated and untreated pain is most acute in the developing world, it also affects the poor living in many industrialized nations.

In the United States, disparities in management of chronic and acute pain—including postoperative pain, cancer pain, back pain, and migraine pain—have been documented in health settings ranging from emergency departments[4] to nursing homes.[3] A quarter or more of nursing home residents reporting pain receive no analgesic medication.[3,5]

The lack of pain management options for marginalized populations among and within countries raises significant global health equity concerns. Equitable access to management requires an appreciation of the multiple barriers that exist, nationally and internationally, to providing effective analgesics to patients. Complex socioeconomic, cultural, and political factors merge in poor states and in some rich states to generate substandard pain management. Obstacles to effective pain management can be grouped into 3 categories: attitudes and misconceptions among health care workers and patients, lack of access to common effective analgesics, and the legal and regulatory environment.

See also p 70.

Attitudinal Barriers

Attitudinal barriers to adequate treatment for pain include poor understanding of and lack of education regarding pain and pain medications. In rich and poor countries alike, many patients and physicians hold unsubstantiated fears that addiction will result from opioid use during appropriate pain management.[1,6] Research, however, has established that the risks of addiction associated with the proper use of medicinal opioids are greatly exaggerated and are very low in cases of acute, cancer, or terminal pain.[1,6] Misconceptions among health professionals are perpetuated by a lack of appropriate training in pain management.[7,8] This problem is particularly acute in poor countries, where a lack of training and basic education in the use of opioid analgesics is widespread.

Poor education in pain management may also contribute to socioeconomic, racial, and ethnic disparities in pain amelioration. Clinical decision making about pain is inconsistent, reflecting gaps in knowledge and training. Assessment and treatment, therefore, is "vulnerable to social context effects" rather than sound scientific and clinical judgment.[8,9]

The ramifications of attitudinal factors is evident in countries such as Japan, where the annual per capita consumption of oral morphine is only 4.7 mg—below the global mean of 5.9 mg.[10] The relatively low level of analgesic consumption is notable given Japan's aging population, universal health care system, affluence, and relative lack of extensive regulatory restrictions on prescription narcotics.[11]

Access Barriers

Like attitudinal barriers, access barriers are particularly severe in poorer countries, where the supply of narcotic medications is inadequate.[12] Even where narcotic analgesics are available at the country level, physical access is often limited. Opioid availability in developing countries is often

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restricted to specialty centers, depriving significant portions of the population of access to such analgesics.[13]

Problems of physical access to narcotic analgesics contribute to the undertreatment of pain, especially among minority populations, in the United States and other industrialized countries. Pharmacies in predominantly minority US neighborhoods are less likely to carry opioid analgesics in comparison to those in predominantly white neighborhoods.[14,15] In Michigan, for example, pharmacies in zip code areas with predominantly minority group populations were 52 times less likely to carry sufficient supplies of opioid analgesics than those in zip code areas with predominantly white populations.[14] In New York City, pharmacies in predominantly nonwhite neighborhoods were approximately two-thirds less likely than those in predominantly white neighborhoods to carry sufficient supplies.[15]

Legal Barriers

The overregulation of medicinal opium is an enduring and critical problem that contributes to the global undertreatment of pain.[16] Governments are legitimately concerned about the diversion of licit medicines into illicit markets. Frequently, however, the regulatory responses have not been narrowly designed to ensure that law enforcement concerns do not unduly interfere with medical availability.[17] As a result, the prescription and distribution of opioids are so tightly regulated in many countries that the effective treatment of pain becomes burdensome for physicians, nurses, and pharmacists. At the patient level, overregulation stigmatizes the use of controlled analgesics and generates privacy concerns, further reducing the treatment of pain.[18]

The national legal and regulatory environment contributes to the significant undertreatment of pain. Where regulations controlling the manufacturing, importing, transporting, and dispensing of narcotic analgesics are overly zealous or poorly crafted, they contribute to the inadequate availability of analgesics. Conversely, when national or subnational regulations are reformed in an evidence-based manner, access markedly improves. Kerala, India, for example, recently loosened onerous licensing requirements for pharmacies, which facilitated a major increase in community-based palliative care centers with oral morphine and improved patient access. Carefully crafted regulations, moreover, can increase access to pain medication without increasing misuse or causing increased diversion to illicit markets.[19]

In some countries, regulations directly restrict the capacity of health care professionals to appropriately treat pain. For example, Argentina, Costa Rica, and Peru have adopted laws and regulations limiting the dosage, the duration, or both, of treatments involving opioids.[12] Elsewhere, laws allow opioid prescriptions for some populations (eg, adults) or some types of pain (eg, postoperative pain) but do not allow opioid prescriptions for other populations (eg, children) or other types of pain (eg, cancer pain).[7]

Fears of criminal prosecution also contribute to the undertreatment of pain. While criminal prosecutions of physicians are rare, recent, widely publicized cases in the United States have had a chilling effect on the treatment of pain.[7] Elsewhere in the world, criminal law creates fears of prosecution among physicians, nurses, pharmacists, and patients, constituting a substantial barrier to the medically appropriate treatment of pain.

The international legal environment also contributes to the undertreatment of pain. Morphine and other opioid analgesics that are integral to the relief of pain are controlled substances under the 1961 United Nations Single Convention on Narcotic Drugs,[20] the centerpiece of a complex United Nations drug-regulatory regime. The Single Convention has been ratified by 184 countries[21] and is highly influential in standardizing national drug regulatory laws among parties as well as nonparties to the treaty.

The dual aims of the Single Convention are to control the use and trafficking of substances with abuse potential while ensuring the availability of these drugs for scientific and medical purposes. Under the treaty, controlled substances are subject to stringent national regulation and global monitoring at each stage of the supply chain. Government authorization (licensing and state ownership) is mandatory for participation in any phase of the narcotics trade, and each individual international transaction requires an export or import license. At the heart of the Single Convention's drug control scheme is a global "estimates" system, which is designed to limit the total quantity of drugs, whether produced domestically or imported, to that needed for medical and scientific purposes.

Despite the dual aims of control and medical access in the convention's language and structure, the international institutions that have collective responsibility to implement the convention—namely, the Commission on Narcotic Drugs, the International Narcotics Control Board, and the United Nations Office on Drugs and Crime—have emphasized a strict drug prohibitionist and law enforcement approach to treaty interpretation and application in an effort to bolster global action against drug abuse.

This strict prohibitionist approach has been ineffective in countering global drug trafficking and is at odds with contemporary public health practice, which focuses on reducing drug abuse and its adverse consequences. In addition, as a matter of treaty interpretation, the Single Convention is appropriately understood as not only encompassing efforts to control abuse but also promoting efforts to guarantee legitimate access to pain medication for patients. By deviating from the principle of balance underlying the Single Convention, global drug agencies have relegated concerns of medical availability to secondary consideration. This law enforcement approach has been mirrored at the state level. Although most governments are familiar with the Single Convention's drug-control requirements, few focus on the mandate to ensure medical availability.[19]

Unrelieved Pain in the Poorest Countries

While barriers to adequate pain treatment are similar from one country to another, these similarities should not mask profound disparities between rich and poor nations. Attitudinal,

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access, and legal barriers to adequate pain treatment are magnified in poor countries, where pain management occurs within an environment of poverty and underdevelopment. Basic pain management in poor countries must compete for limited resources with other primary health care services as well as with other social concerns, such as food and education.[22] At the patient level, poverty, demography, and geography merge to further obstruct access to medicinal opium. Patients who cannot afford medication or who are unable to travel to palliative care centers are excluded from care.

Global disparities in pain treatment are not merely attributable to the intensification of qualitatively similar barriers but also result from a manufactured access barrier: high price. Morphine sulfate is generally a low-cost and effective analgesic ideally suited for resource-poor nations—a 10-mg generic immediate-release tablet should not cost more than 1 cent.[2,7] Opioid costs in developing countries, however, often exceed those in developed nations. While a typical month's supply of morphine sulfate tablets should cost only from $1.80 to $5.40, the actual cost in many developing countries ranges between $60 and $180.[7] When the cost of opioid therapies is calculated by per capita monthly income, the economic barriers to pain treatment are even more marked. In Argentina and Mexico, a month of opioid therapy can be more than 200% the average monthly income.[12]

Undertreatment of Pain as a Public Health Issue

Undertreatment of pain is a widespread problem with a disparate effect on the world's most vulnerable populations among and within nations. Unless undertreatment of pain is prioritized as a public health issue, it is likely that an increasing proportion of the world's population will live with and die in unnecessary pain.

The undertreatment of pain is not an intractable problem. Successful interventions have been documented in many countries, including Italy, Romania, and parts of India, providing useful models for reform. New narcotics legislation and regulations in Romania, for example, vastly simplify the administrative process for obtaining medicinal opioids and allow the prescription of strong opioids for patients with severe pain, regardless of the underlying cause.[23] Romanian health officials, moreover, are engaged in education campaigns designed to inform the public, health care professionals, regulators, and the police.[19]

Legal reforms at the national level can be complemented by international action. The Single Convention establishes powerful mechanisms for improving medical access to pain medications. Notably, the International Narcotics Control Board could use its annual reports to draw attention to access issues at the national level and to encourage countries to undertake needed legal reforms. The board also could incorporate a medicinal access focus more explicitly in its reviews of individual states and make balanced recommendations that facilitate effective pain treatment.

Interventions to improve the treatment of pain should be a key public health priority. The problem of undertreatment need not be a global issue of immense proportions; it can be ameliorated by proven interventions. Moreover, unlike many of today's narrow, disease-specific public health interventions, promoting equitable access to appropriate pain medication can be an effective horizontal strategy that improves quality of life for all patients. As disease burdens shift in various countries, pain will persist. However, there is ample medical capacity to treat pain. Justice requires that equitable access to effective pain treatment be secured domestically and globally.

Financial Disclosures: None reported.

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